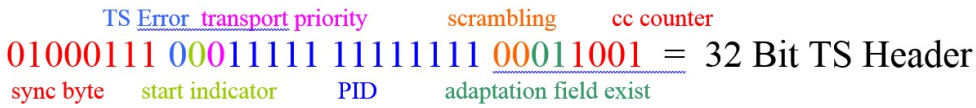
Transport Stream Analysis

A Transport Stream packet is a fixed length packet, there are a few Transport Stream packet sizes to be aware of:

- 188 Transport Stream
- 192 Transport Stream + 4 bit Timecode (MT2S Blu Ray)
- 204 Transport Stream + FEC (DVB-T/C/S)
- 208 Transport Stream + FEC (ATSC 8-VSB, 208)
- 208 Transport Stream + Reed Solomon (ATSC)

Transport Stream Packets are the basic units of a Transport Stream, each TS packet starts with a Sync Byte (0x47) and this is used to identify each packet (so 0x47 shouldn't be used elsewhere in the packet).

Each TS packet has a 32 bit header, shown below.



The TS Header above (also called the TS 4 Byte Prefix) is from a real TS packet, below is the TS header in Hex.


```
Name            Bits    Bin        Hex    Dec        Description

Sync Byte       8    01000111    0x47        Sync Byte
TS Error        1    0        0x00        Error indicator (0=No Error, 1=Error)
Start Indicator     1    0        0x00        1 means start of PES or PSI otherwise 0
Transport Priority  1    0        0x00        see table below
PID         13    1111111111111    1FFF    8191    PID is 8191 (1FFF) = stuffing packet
Scrambling      2    00        0x00        00 = not scrambled
Adaptation Field Exist  2    01        0x01        01 means no adaptation fields
CC Counter      4    1001        0x09        continuity counter

Total           32
```